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The AMERICAN ENGINEER

OFFICIAL PUBLICATION
THE NEW YORK STATE SOCIETY
OF PROFESSIONAL ENGINEERS

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Arthur V. Sheridan, Editor

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PUBLIC RECOGNITION OF ENGINEERS

What One Chapter Has Accomplished

The recent convention of the New York State Waterways Association, held under the auspices of the Bronx Chapter of the New York State Society and cooperating civic groups, is an index of the prestige which that Chapter enjoys. Supported by the Board of Trade, the Real Estate Board, the Rotary Club and the Press, the Chapter sponsored and conducted what the Waterways Association itself declared to have been the most successful convention it has ever held. And this in the face of trying economic conditions.

Distinguished representatives of the U. S. Army Engineer Corps, the State of New York and the principal cities throughout the State, presented papers and delivered addresses. The "Possibilities of the Deep Water Frontage of The Bronx" was the subject of an address by Joseph F. Lamb, Vice-President of the Chapter.

President Haring, who was responsible for bringing the Convention to The Bronx, was ably supported by the committees which arranged the program. The courtesy and co-operation of Leslie G. Halloran, Past President of the Westchester Chapter, provided a police escort for the inspection of the Westchester Parkway System. The Waterways Association and the Society derived a mutual benefit which suggests similar possibilities to every Chapter.

The following letter speaks for itself:

NEW YORK STATE WATERWAYS ASSOCIATION
Office of the Assistant Secretary
74 Chapter Street, Albany, N. Y.

October 30, 1931.

Professor Alexander Haring,
2489 Sedgwick Avenue,
The Bronx, N. Y.

My dear Professor Haring:

At the closing session of the Twenty-Second Annual Meeting of the New York State Waterways Association, held in the Concourse Plaza Hotel, Bronx, N. Y., October 27th, a resolution was unanimously adopted extending the thanks and congratulations of this Association to you and your associates on the Committee of Arrangements for the splendid manner in which the details of the Bronx Convention were handled. It was the consensus of the Convention that the delegates and attendants not only enjoyed a very fine time but felt that the Bronx Committee did everything possible to make their stay pleasant and enjoyable and that the hospitality of the Bronx Committee was unexcelled.

I would like to take this opportunity also to extend my personal thanks and appreciation for the friendship and co-operation extended in the preliminary negotiations and during the sessions of the Convention. I feel that the Committee of Arrangements contributed largely in making the Convention a success in every way. Will you please extend to your associates of the Bronx Committee the thanks and appreciation of the officers and members of this Association.

With very kindest regards, I am

Very cordially yours,
(sgd.) ROY S. SMITH,
Executive Secretary.

The service which the Society, through its Chapters, can offer, and has in many instances already rendered, to a community, is creating, in every county where there is a live and active organization, a recognition of the engineering profession which exceeds the hopes of those who have in the face of indifference and even opposition sought to bring the engineer into closer contact and higher esteem with the general public.

The Waterways Convention is but one of the many activities of a civic nature which Bronx Chapter has engaged in. Its position has become so well established that within a week after the said convention the local press was calling upon it to foster a planning commission for the county.

In addition to its civic and professional activities the Chapter is sponsoring classes in Public Speaking and is about to inaugurate a course in Business Law. These opportunities are offered without cost to the membership.

Professor Alexander Haring of New York University, President of the Chapter, Teacher, Engineer, Attorney-at-Law, and recently chosen one of

the ten most distinguished men in a community of more than a million and a quarter people, is personally conducting these courses. Despite the fact that for such services he is elsewhere at the time being properly compensated Professor Al, as he is known throughout civic circles of the county, is giving his knowledge and his time in a generous desire to help engineers attain recognition in public affairs.

The Society is indebted to such men as President Haring. This is the spirit that is making the New York State Society something different from any existing engineering association. It should appeal to all members of the profession and deserves the support of every licensed engineer in the State of New York. There is but one way to evince that support. Join the Society. Do it now.

EDITOR.

ARCHITECTURE OR ENGINEERING

Again The Question Is Raised

The November issue of Civil Engineering contains, under the heading "Should Engineers Practice Architecture," a communication from one who designates himself "Structural Engineer."

With such a caption any presentation of fact or argument seems unnecessary. The expression that architects are not attempting to practice engineering is the opinion of one engineer who is evidently unfamiliar with conditions and with the problem in question. The fact that plans of sewers, treatment works and similar projects, actually prepared by engineers, have been signed only by architects and to all intents and purposes held out as their work, is not convincing to one who does not wish to be enlightened.

The scope of architectural requirements as set up by an architects' board, including, as it does, such subjects as columns, girders, trusses, wind bracing, foundations, soil pressures, concrete, masonry, heating, ventilating, electrical equipment, currents, motors, generators, storage batteries, water supply, sewage disposal plants, filtration and sprinkler systems, elevators, etc., does not suggest the right of architects to practice structural, sanitary, hydraulic, electrical and mechanical engineering to a person who is not open to conviction or who may not be familiar with the facts as published in Handbook 35 issued by the State Department of Education.

The author of the communication argues from false premises. No attempt is made to set forth what constitutes engineering or architecture. The determining element is not the type of structure involved, but the type of knowledge required. If a person employs mathematics, physics and chemistry in order to determine the dimensions and materials of members and parts of a structure he is unquestionably practicing engineering. Is it any the less so because the structure is a building?

The engineer does not seek to practice architecture. Designing, constructing or installing steel, concrete, masonry, electrical and mechanical equipment and apparatus, sanitation, light, heat and ventilation is not practicing architecture. This the engineer contends falls almost entirely within his province, and the architect is no more justified in terming it architecture than the engineer would be in insisting that the styles, orders, sculpture, paint, color, furniture, decoration, composition, arrangement, planning, esthetic design and various other subjects which engineers do not claim as their province and which comprise three-quarters of the requirements for the practice of architecture as set forth in the examinations listed in the above mentioned Handbook of the State Department of Education, is engineering.

An architect is generally employed in connection with the esthetic treatment of projects such as bridges, dams and arches. Is he practicing engineering because the structure is primarily an engineering one? Certainly not. Was the engineer who designed the steel framework, the all important element of the Empire State Building, practicing architecture because the structure was a building? Were the engineers who designed the mechanical and electrical equipment practicing architecture for the same reason? The contentions of "Structural Engineer" are refuted by common sense.

The engineer is not seeking to encroach on the prerogatives of any other professional man. He is not attempting to define or limit the field of the architect. He does insist, however, on his right as a professional man to act as a principal for a client if the latter wishes to retain him in that capacity. A corporation, or a community, about to construct a hydro-electric power plant, a chemical or physical laboratory, a transmitting station or a disposal works, can hardly be expected to retain an architect as principal for such projects. The protection of human life and property justifies the selection of an engineer for the post. The client has the right to protect himself and the state has the right to demand safeguards. A mechanical or electrical engineer is just as capable of retaining an architect or an engineering specialist of any kind as is an architect. The qualification of an engineer to safeguard life, health and property in the design and erection of structures is not excelled or even equalled by any other professional man. The Engineers' Law provides for revoking the license of any one who proves incompetent. The Architects' Registration Act does not. Regardless of failures or loss of life an architect may retain his right to practice.

The correspondent terms himself a Structural

Engineer. One asks what is a structural engineer? Does a highway, sanitary, water supply, railroad, or maritime engineer come within this category? Such engineers are continually building bridges, buildings, dams, docks, wharves, tunnels, arches, galleries, pumping plants and various other structures in connection with their work. Would one replace or subordinate engineers on subways, water systems, sanitation provisions or commercial projects because they design and construct buildings of various sorts in connection with their respective practices. Common sense and a little consideration of the general public should prevail. If the owner of a hotel, for example, wants to change a heating system, install refrigeration or replace mechanical equipment, why should he be compelled to retain an architect, who, in turn, must secure an engineer to effect his desires. Such an attitude is entirely selfish and serves only the purpose of subordinating the engineer as a professional man in order that the architect may collect a fee for selecting such engineer.

As for the reference to the Multiple Dwelling Act, the said Structural Engineer would do well to advise himself of the conditions and questions involved in the City of New York. The Tenement House Department passes no judgment on the safety of structures and its examiners are not part of the engineering service of that city. The Building Bureaus, the Dock Department, the Fire Prevention Bureau and the Board of Standards and Appeals, which either directly or indirectly determine the requirements for the safety of structures, employ only engineers. All the engineer asks is the right to prepare and file those plans which only engineers are permitted to examine and approve. When examination and approval of those features which require expert architectural services are made mandatory the engineer will be the first to acknowledge the right of the architect to pass judgment thereon and to support and respect his professional status.

Consideration of the public welfare, as well as the rights of both professions, should be a matter of mutual concern rather than controversy. The engineer will eliminate from his profession the incompetent, unethical and dishonest practitioner. There is little doubt but that the architect can be entrusted with the same responsibility. The right of either to define the rights or practices of the other is untenable.

WHY RESPECT FOR EDUCATION SUFFERS

Colleges Should Restrict the Term Science

The press of September 29th contains some opinions expressed by a Dr. Charles Gray Shaw, of New York University. Professor Shaw is quoted as saying that whistling is an unmistakable sign of a moron. One is inclined to believe that he meant to be facetious when he said "it is only the inferior and maladjusted individual who ever seeks emotional relief in such a bird-like act as that of whistling." Such expression however appears in the light of a deduction by one who, according to newspaper reports, teaches philosophy, including the poor abused, misused and intangible subject known as modern psychology.

President Hoover along with Edison, Einstein and Mussolini are mentioned as great men who could not be accused of being morons under the test prescribed by Prof. Shaw. Subsequent reports eliminate Mussolini, who appears to be an excellent and rather frequent devotee of whistling.

Lincoln has often been pictured as drumming on a table with his fingers and whistling an accompaniment thereto whilst the members of his cabinet assailed one another and everybody else during a meeting of that group.

One cannot but wonder what kind of a person the moron, of which the professor speaks, is. The great composers of music must have proved their claims to moronship on countless occasions.

Soldiers during the great war marched for hours to the accompaniment of the Madelon, Tipperary and other marching tunes; poor fellows, millions of them, morons without knowing it.

Some replies to the statement of the author of "What Proof Moron" are so unkind as to ask who's loony now. However, the real import of the question is the effect such a statement produces on persons already critical of our educational system, which so frequently lists unproven theories in the category of science.

The all too frequent terming of psychology and various other ologies and isms as science is an unwarranted disregard of truth, which causes legitimate sciences, such as mathematics, physics and chemistry, to suffer the attacks of persons who cannot distinguish between subjects based upon immutable natural laws, known at least in part to mankind, and those speculative matters which are inherently subjective and for which to date no infallible or even remotely universal laws have been discovered. Colleges would actually fulfill their intended functions and prove of real benefit to mankind if they would cease designating education that produces such childish deductions as the moronship of whistlers as science.

Immature minds accept as absolute anything called science. The time has arrived for the institutions of higher learning to get together in company with representative scholars and real scientists and set up certain standards, tests and proofs which must be met before designating any field or phase of human thought as a science.

COLLEGE DEGREES OF LICENSED PROFESSIONAL ENGINEERS

By D. B. STEINMAN

President, New York State Society of Professional Engineers
President, National Council of State Boards of Engineering Examiners

The 1931 roster of Professional Engineers and Land Surveyors licensed in New York State introduces the innovation of recording the college degrees of the licensees. The purpose was to secure a cross-section of the formal education preparation of the profession. This information in the current roster is particularly significant, since it records the educational standing of those licensed in the State *prior to the incorporation of educational requirements in the licensing law,* under the amendment which became effective March 23, 1931. With the new standards in mandatory operation and with the practical expiration of the necessity of taking care of those who were practicing before the original licensing law was enacted in 1920, the ratio of college-trained licensees is bound to increase in the ensuing years. Accordingly the data furnished by the 1931 roster is significant as a measure of the educational preparation of those accepted in the past and as a starting point for comparing future progressive improvement of the educational status of the licensed body of the profession.

The 1931 roster carries approximately 9,400 names, of which 8,862 are licensed as Professional Engineers. (The remaining 538 are licensed as Land Surveyors only.)

Among the 8,862 licensed Professional Engineers, there are officially recorded 5,958 college degrees, a ratio of 67.2 percent. Of this number of degrees, 312 are second, third or fourth degrees, representing about 300 engineers who possess more than a single degree. Deducting this correction for multiple degrees, we find that 5,646 of the licensed Professional Engineers in New York State have one or more college degrees. Accordingly, *63.5 percent of those now licensed in New York State as Professional Engineers are college-trained men, holding one or more college degrees.*

Of the 8,862 licensed Professional Engineers in New York State, *2,020 (or 22.8 percent) have the baccalaureate degree representing graduation from a college of liberal arts or sciences.* These Bachelor's degrees are enumerated as follows:

B. S.	1,594
S. B.	136
A. B.	136
Ph. B.	104
B. A.	42
B. Ch.	8
	2,020

Of the 8,862 licensed Professional Engineers in New York State, *3,626 (or 40.9 percent) have professional degrees in engineering,* representing graduation from a recognized school or college of engineering. These engineering degrees are enumerated as follows:

C. E.	1,890
M. E.	1,018
E. E.	440
B. E.	112
E. M.	54
B. E. in E. E.	32
Ch. E.	26
M. M. E.	22
M. C. E.	10
B. M. E.	10
Min. E.	6
I. Eng.	6
	3,626

Of the 8,862 licensed Professional Engineers in New York State, *272 (or 3 percent)* have post-graduate or honorary degrees. Of these, 168 are Master's degrees, as follows:

M. Sc.	82
M. A.	36
A. M.	34
S. M.	14
M. Ph.	2
	168

The remaining 104 of these higher degrees are Doctorates, as follows:

Ph. D.	54
D. E.	20
Sc. D.	12
D. Sc.	12
LL. D.	6
	104

In addition, 40 of the licensed Professional Engineers have extended their studies to secure degrees in other professions, as follows:

L. L. B.	24
L. L. M.	6
J. D.	6
Ph. G.	4
	40

(Continued on Page 11)

MEETING OF EXECUTIVE BOARD

New York—October 14, 1931

The Fall meeting of the Executive Board of the State Society was held October 14th, at the Murray Hill Hotel in New York, with President Steinman presiding and Assistant Secretary W. A. Stubbs recording the minutes.

A conference of Engineers and Architects, proposed by George L. Lucas, President of the Metropolitan Section, was discussed at some length. The Board expressed itself as willing to confer at any time with representatives of other professional groups, but recorded its disapproval of any attempt to divide the profession or to forestall legislation which the Society and co-operating groups have under consideration. The Board also recorded its opinion to the effect that representation on any committee should be reasonably commensurate with the membership of the Society represented, and that the proposal to omit representation from Mechanical and Electrical Engineering organizations was not consistent with the aims of this Society which represented all branches of the profession. The interests of Mechanical and Electrical Engineers are of as much importance as those of any other group and no legislation discriminatory to any branch of engineering can be acceptable to the professional Society of this State. The sponsor of the proposal has been so advised by President Steinman.

The returns on the vote to adopt an emblem indicated a majority two to one in favor thereof, with about 25% of the membership voting. In accordance with the requirements the President appointed Messrs. Smyth, Fox and Corry to serve as a committee to secure and submit suggested emblems. Every engineer is invited to submit an original design which should be simple but comprehensive enough to recognize the unity of the profession of engineering.

The incorporation of the Society was formally recorded and its future activities will be consistent with the requirements of a corporate body.

The proposed building Code for the City of New York was reported on by Mr. A. V. Sheridan, Temporary Chairman of a special committee to analyze the said Code.

Vice-President H. A. Kidder, advised that the proposed Uniform Registration Law was to be further considered in the light of a Model Law and that the New York State Act was being suggested as a standard. The necessity for incorporating at an early date, the amendments proposed by this Society is an urgent need and the enactment of the required legislation was stressed.

The Board requested Past President A. V. Sheridan to make a speaking tour of the State with a view to arousing interest in the Society and its program. A tentative itinerary prepared by Assistant Secretary Stubbs covers Albany, Utica, Syracuse, Rochester and Buffalo. It is intended that the Chapters in which those cities are located shall hold a joint meeting with other groups to which will be invited engineers from the surrounding counties. The establishment of additional Chapters is a most important part of the Society's plan.

The legislative program was outlined by President Steinman and will shortly be presented to the Society for consideration.

The committee on Chapter activities reported on the proposed New York State Waterways Convention sponsored by the Bronx Chapter, the joint meeting of the Westchester Chapter with the Westchester Medical Association and a suggested Long Island meeting to be sponsored by the counties of Kings, Queens, Nassau and Suffolk. The inactivity of Erie Chapter received special consideration. The Chairman reported that efforts to stimulate interest are under way.

The following resolution was adopted and entered upon the records of the Society:

WHEREAS, Dr. James Sullivan, in the exercise of his duties as Assistant Commissioner in Charge of Higher and Professional Education in the State of New York had been closely associated for years with the engineering profession of the State, and

WHEREAS, He gave freely and unstintingly of his energies and counsel in aiding that profession in its legislative endeavors to maintain and strengthen the legal safeguards erected for the protection of the lives and properties of the citizens of the State, and

WHEREAS, He stimulated and supported all efforts which were designed to improve the capacity of the engineering profession for increasing worthy service to the people of the State by elevating the standard of qualifications for admission to professional engineering practice and by restricting such practice to persons of character and competence, and

WHEREAS, His untimely end has deprived the State of a signally gifted and faithful servant and this Society of an energetic collaborator, a wise counsellor and a sincere friend, therefore be it

RESOLVED, That the Executive Board of the New York State Society of Professional Engineers, in its own behalf and on behalf of the members of that Society, hereby expresses its sincere sorrow at his passing and extends its heartfelt sympathy and condolence to his family, and be it further

RESOLVED, That the Secretary transmit a copy of this resolution to Mrs. James Sullivan.

Lack of space prevents further details of the meeting minutes of which are available upon request.

EXAMINATIONS FOR REGISTRATION OF PROFESSIONAL ENGINEERS

Recommendations Adopted October 2nd, 1931

The first installment of the report on Examinations for Candidates, as approved by the National Council of State Boards at its Annual Meeting for 1931, appeared in the October issue of this publication.

The report is herewith continued. Expressions of opinion gathered from States throughout the country recommend themselves to the attention of the reader.

Scope of Examinations

In order to secure a cross-section of present practice and opinion in respect to scope of examinations for registering Professional Engineers, check lists of subjects and topics were submitted with the questionnaires sent to Board members, and the latter were requested to indicate the subjects now included in their examinations as well as their individual recommendations thereon. Two groups of subjects were submitted, one for the uniform part of the examination and the other for the differentiated (specialized) part. The responses relative to the subjects suggested for the uniform part will first be presented and analyzed.

Mathematics

The mathematical studies to be included in the scope of a standard uniform examination for Professional Engineers are indicated by the following returns:

Algebra—Now included by 8 States (out of 18). Not favored by 3 Board members (out of 32). Committee recommendation: **Include.**

Advanced Algebra—Now included by 5 States. Not favored by 3 Board members. Committee recommendation: **Include.**

Logarithms—Now included by 8 States. Not favored by 3 Board members. Committee recommendation: **Include.**

Plane Geometry—Now included by 10 States. Not favored by 2 Board members. Committee recommendation: **Include.**

Solid Geometry—Now included by 9 States. Not favored by 2 Board members. Committee recommendation: **Include.**

Plane Trigonometry—Now included by 12 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Spherical Trigonometry—Now included by only 3 States. Not favored by 8 Board members. Committee recommendation: **Omit.**

Analytical Geometry—Now included by 6 States. Not favored by 6 Board members. Committee recommendation: **Include.**

Differential Calculus—Now included by 4 States. Not favored by 7 Board members. The Committee cannot conceive an adequate modern engineering training without a study of Calculus, and therefore firmly recommends its inclusion.

Integral Calculus—Now included by 3 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Accordingly the Committee recommends that the standard uniform examinations for Professional Engineers cover the following scope in **Mathematics:** Algebra, Advanced Algebra, Logarithms, Plane and Solid Geometry, Trigonometry, Analytical Geometry, Calculus.

Applied Sciences

The basic sciences to be included in the scope of a standard uniform examination for Professional Engineers are indicated by the following returns:

Physics—Now included by 9 States (out of 18). Not favored by 2 Board members (out of 32). Committee recommendation: **Include.**

Mechanics—Now included by 10 States. Not favored by 2 Board members. Committee recommendation: **Include.**

Statics—Now included by 7 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Dynamics—Now included by 6 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Hydraulics—Now included by 11 States. Not favored by 1 Board member. Committee recommendation: **Include.**

Thermodynamics—Now included by 7 States. Not favored by 6 Board members. Committee recommendation: **Include.**

Electricity—Now included by 8 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Electro-Magnetism—Now included by 5 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Chemistry—Now included by 5 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Qualitative Analysis—Now included by only 3 States. Not favored by 6 Board members. Committee recommendation: **Omit.**

Geology—Now included by 6 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Geodesy—Now included by only 3 States. Not favored by 6 Board members. Committee recommendation: **Omit.**

Accordingly the Committee recommends that the standard uniform examinations for Professional Engineers cover the following scope in **Applied Sciences:** Physics, Mechanics, Statics, Dynamics, Hydraulics, Thermodynamics, Electricity, Electro-Magnetism, Chemistry.

Graphics

The graphical studies to be included in the scope of a standard uniform examination for Professional Engineers are indicated in the following returns:

Descriptive Geometry—Now included by 5 States (out of 18). Not favored by 8 Board members (out of 32). Committee recommendation: **Omit.**

Mechanical Draughting—Now included by 4 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Structural Draughting—Now included by 4 States. Not favored by 6 Board members. Committee recommendation: **Omit.**

Graphic Statics—Now included by 7 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Kinematics—Now included by 5 States. Not favored by 8 Board members. Committee recommendation: **Omit.**

Accordingly **Graphic Statics** is the only subject of this group to be retained in the standard uniform examinations. It can readily be incorporated in one of the other groups.

Materials of Construction

The subjects under this heading to be included in the scope of a standard uniform examination for Professional Engineers are indicated by the following returns:

Resistance of Materials—Now included by 10 States (out of 18). No Board members opposed. Committee recommendation: **Include.**

Steel—Now included by 10 States. Not favored by only 1 Board member (out of 32). Committee recommendation: **Include.**

Reinforced Concrete—Now included by 10 States. Not favored by only 2 Board members. Committee recommendation: **Include.**

Masonry Construction—Now included by 9 States. No Board members opposed. Committee recommendation: **Include.**

Timber Construction—Now included by 11 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Fireproofing—Now included by 3 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Metallurgy—Now included by 5 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Mineralogy—Now included by 4 States. Not favored by 9 Board members. Committee recommendation: **Omit.**

Accordingly the Committee recommends that the standard uniform examinations for Professional Engineers cover the following scope in **Materials of Construction:** Resistance of Materials, Steel, Reinforced Concrete, Masonry Construction, Timber Construction.

Elements of Structural Design

The topics under this heading to be included in the scope of a standard uniform examination for Professional Engineers are indicated by the following returns:

Stress Analysis—Now included by 10 States (out of 18). No Board members opposed. Committee recommendation: **Include.**

Wind Bracing—Now included by 7 States. Not favored by 2 Board members (out of 32). Committee recommendation: **Omit.**

Beams—Now included by 10 States. No Board members opposed. Committee recommendation: **Include.**

Slabs—Now included by 9 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Columns—Now included by 10 States. No Board members opposed. Committee recommendation: **Include.**

Girders—Now included by 9 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Trusses—Now included by 10 States. No Board members opposed. Committee recommendation: **Include.**

Foundations—Now included by 9 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Retaining Walls—Now included by 9 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Abutments—Now included by 9 States. Not favored by 1 Board member. Committee recommendation: **Omit.**

Structural Details—Now included by 8 States. Not favored by 2 Board members. Committee recommendation: **Omit.**

Building Codes—Now included by 6 States. Not favored by 3 Board members. Committee recommendation: **Omit.**

Unit Stresses—Now included by 8 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Accordingly the Committee recommends that the standard uniform examinations for Professional Engineers cover the following scope in **Elements of Structural Design:** Stress Analysis, Beams, Slabs, Columns, Girders, Trusses, Foundations, Retaining Walls, Unit Stresses. The subject of Graphic Statics, previously recommended, can also be included in this group.

Elements of Mechanical Design

The subjects under this heading to be included in the scope of a standard uniform examination for Professional Engineers are indicated by the following returns:

Power—Now included by 7 States (out of 18). Not favored by 3 Board members (out of 32). Committee recommendation: **Include.**

Heating—Now included by 6 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Ventilation—Now included by 6 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Prime Movers—Now included by 6 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Machine Elements—Now included by 5 States. Not favored by 5 Board members. Committee recommendation: **Omit.**

Stresses in Machine Parts—Now included by 5 States. Not favored by 5 Board members. Committee recommendation: **Omit.**

Boiler Design—Now included by 6 States. Not favored by 4 Board members. Committee recommendation: **Omit.**

Kinematics—Now included by 4 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Mechanical Transmissions—Now included in 6 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Elevators—Now included by 5 states. Not favored by 7 Board members. Committee recommendation: **Omit.**

Engineering Thermodynamics—Now included by 3 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Water Power—Now included by 8 States. Not favored by 3 Board members. Committee recommendation: **Include.**

Accordingly the Committee recommends that the standard uniform examinations for Professional Engineers cover the following scope in **Elements of Mechanical Design:** Power, Heating, Ventilation, Prime Movers, Mechanical Transmissions, Water Power.

Elements of Electrical Design

The subjects under this heading to be included in the scope of a standard uniform examination for Professional Engineers are indicated by the following returns:

Electrical Measurements—Now included by 5 States (out of 18). Not favored by 5 Board members (out of 32). Committee recommendation: **Omit.**

Laws of Electricity—Now included by 6 States. Not favored by 5 Board members. Committee recommendation: **Include.**

Laws of Electro-Magnetism—Now included by 6 States. Not favored by 5 Board members. Committee recommendation: **Omit.**

Electrical Equipment—Now included by 6 States. Not favored by 5 Board Members. Committee recommendation: **Include.**

Wiring and Insulation—Now included by 4 States. Not favored by 6 Board members. Committee recommendation: **Omit.**

Direct and Alternating Current Circuits—Now included by 6 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Types and Characteristics of Motors—Now included by 6 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Types and Characteristics of Generators—Now included by 6 States. Not favored by 4 Board members. Committee recommendation: **Include.**

Transformers and Converters—Now included by 5 States. Not favored by 4 Board members. Committee recommendation: **Omit.**

Accordingly the Committee recommends that the standard uniform examination for Professional Engineers cover the following scope in **Elements of Electrical Design:** Laws of Electricity, Electrical Equipment, Direct and Alternating Current Circuits, Types and Characteristics of Motors and Generators.

Engineering Administration

The subjects under this heading to be included in the scope of a standard uniform examination for Profession Engineers are indicated by the following returns:

Engineering Economics—Now included by 9 States (out of 18). Not favored by 5 Board members (out of 32). Committee recommendation: **Include.**

Accounting—Now included by 3 States. Not favored by 11 Board members. Committee recommendation: **Omit.**

Business Law—Now included by 5 States. Not favored by 6 Board members. Committee recommendation: **Omit.**

Corporation Finance—Now included by 2 States. Not favored by 10 Board members. Committee recommendation: **Omit.**

Valuation—Now included by 6 States. Not favored by 7 Board members. Committee recommendation: **Omit.**

Contracts—Now included by 7 States. Not favored by 2 Board members. Committee recommendation: **Include.**

Specifications—Now included by 10 States. Not favored by only 1 Board member. Committee recommendation: **Include.**

Professional Practice—Now included by 7 States. Not favored by 4 Board members. Committee recommendation: **Include.**

(Continued on Page 18)

LICENSE LAWS AND ENGINEERS

Comment from the Electrical World

With the approach of the 1932 legislative season the question of registration in states where none exists will doubtless be considered by practitioners of engineering as well as by lawmakers. Correspondence received by the Editor indicates that Connecticut and possibly another of the New England States will give consideration to legislation affecting engineers.

Opposition to licensing, which at one time was quite pronounced in many states, is diminishing each year. In some instances this is due, not so much to approval of the idea of registration, as, to a realization of the fact that legislation being sponsored by other groups is encroaching upon the provinces of engineering and will eventually so restrict the profession as to subordinate it to several other legally recognized callings.

It is evident that the development of human nature does not keep pace with man's progress in knowledge of the physical universe. The surest way to awaken people from lethargy is to figuratively step upon them; and that was as true thousands of years ago as it is today.

The following article, reprinted from the Electrical World of last June, is deserving of attention, particularly from the electrical, mechanical and chemical branches of the profession:

ENGINEERS MUST AWAKEN FROM LETHARGY ABOUT LICENSING

"During the legislative season now ended in all save a few of the states engineer licensing bills were under consideration in several commonwealths. In some such bills were passed; in others the engineers in general were indifferent and the legislators failed to heed the importunities of the minorities that urged the bills. This indifference should not be allowed to persist. Engineers, and especially electrical engineers, should inform themselves of the advantages and disadvantages of a licensing system. Otherwise they are likely to find the engineering profession relegated to an inferior status from which it could never emerge to logical parity with law, medicine and the ministry.

"The ideal aim of licensing would be to exclude inexperienced persons from designing and installing structures and systems in which public safety is involved. The pressure, however, for licensing legislation has often come not from the public but from organized minorities whose motives have often been subversive of the interests of engineers generally. In certain instances architects have brought about the passage of bills which prevent engineers from filing plans for buildings and structures, even those of such a nature that few architects would desire to undertake more than the esthetic elements of the design. In such cases it is the structural engineers who are most concerned with the menace of legislation which will render them subservient to members of another profession.

"It would, none the less, be extremely unfortunate for the rest of the professional engineering world to have legal distinctions drawn which would license only those engineers who design structures involving hazards of travel and habitation. If the inevitable licensing movement is to confer ultimately upon all engineers the professional distinction which they have a right to claim, then all engineers must first agree upon an acceptable definition of their engineering function and after that they must work in concert to see that legislation gives the public protection against incompetency and imposes on the engineers an obligation to meet a minimum qualification.

"The problem is not easy, but its complexity should not be used as a shield by those who feel that licensing confers no immediate benefits on either the public or the engineer. The benefits lie in the decade ahead."

Comment: The Electrical World is to be commended for its consistent editorial policy on the subject of licensing.

COLLEGE DEGREES OF LICENSED PROFESSIONAL ENGINEERS

(Continued from Page 6)

Summarizing, the foregoing analysis of the 1931 roster yields the following classification of degrees held by the licensed Professional Engineers of New York State:

Bachelor's degrees	2,020
Engineering degrees	3,626
Master's degrees	168
Doctor's degrees	104
Other professional degrees	40
Total degrees	5,958

Considering the limitations under which the Licensing Board had to operate up to 1931, without Mandatory educational requirements in the Law, the foregoing is a gratifying showing for the educational status to date. This survey is also a convincing refutation of the charge that the engineering profession is lacking in educational qualification.

The writer is indebted to W. A. Stubbs, Acting Secretary of the N. Y. State Society of Professional Engineers, for the labor of enumerating the degrees listed in the current roster.

(See Editor's Note on Page 19)

NEWS ITEMS

Here and There

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Annual Meeting – New York

November 30th – December 4th

The fifty-second annual meeting of the Society will be held in New York during the week of November 30th.

The A. S. M. E. News advises that an exceedingly interesting and well balanced program has been prepared. In addition to technical sessions given over to such topics as machine shop practice, materials handling, applied mechanics, power, textiles, fuels, management, fluid meters, hydraulics, steam tables, lubrication, aeronautics, iron and steel, oil and gas power, boiler feedwater studies, education and training,—there will be the Towne and Thurston lectures, a public speaking contest, conferring of awards and an art exhibit.

The Exhibition of Art by Engineers, at the 1930 Annual Meeting was such a pronounced success that it has been decided to repeat the exhibit. This year it is proposed to feature paintings, sculpture and etchings made by Engineers during 1931. Interested persons should communcate with the Society immediately.

Members and others intending to attend the meeting should watch the next issues of the A. S. M. E. News.

Comment: The American Society of Mechanical Engineers has inaugurated a most effective method of demonstrating that engineers are as inherently inclined to appreciate art as is any other group.

Congratulations and best wishes for success.

* * *

ELECTION OF OFFICERS FOR 1932

The results of the recent election for Officers were as follows:

President: Conrad N. Lauer, President, Philadelphia Gas Works, Philadelphia, Pa.

Vice-Presidents: Robert M. Gates, Vice-President, Superheater Co., New York, N. Y.; Charles M. Allen, Professor of Hydraulic Engineering, Worcester Polytechnic Institute, Worcester, Mass.; Fred H. Dorner, Mechanical Engineer, Milwaukee, Wis.; William B. Gregory, Professor of Experimental Engineering, Tulane University, New Orleans, La.

Managers: Alexander J. Dickie, Editor, Pacific Marine Review, San Francisco, Cal.; Eugene W. O'Brien, Editor, Southern Power Journal, Atlanta, Ga.; Harry R. Westcott, President, Westcott & Mapes, Inc., New Haven, Conn.

The following were elected delegates to the American Engineering Council:

L. P. Alford, Paul Doty, C. E. Ferris, R. E. Flanders, E. C. Hutchinson, C. N. Lauer, J. H. Lawrence, R. C. Marshall, Jr., A. A. Potter, W. H. Trask, Jr.

* * *

HONORARY MEMBERSHIP

Calvin W. Rice

At the Annual Meeting Calvin W. Rice, who has completed twenty years of service as Secretary of the Society, will, with appropriate ceremonies, become an Honorary Member.

Congratulations—Dr. Rice.

* * *

AMERICAN SOCIETY OF CIVIL ENGINEERS HONORARY MEMBERSHIP

Conferred on Four Engineers

At the recent meeting of the A. S. C. E., held in St. Paul, honorary membership was conferred upon George W. Kittridge, former Chief Engineer of the New York Central R. R.; George H. Pegram, Chief Engineer of the Interborough Rapid Transit Co., of New York; Palmer C. Ricketts, President of Rensselaer Polytechnic Institute of Troy, and Daniel W. Mead, Professor of Hydraulic Engineering at the University of Wisconsin.

The distinction of honorary membership is indicated by the fact that but eighteen living persons have been so recognized. The list includes Herbert Hoover, Chas. P. Schneider of France, Baron Koi Furiuchi of Japan, Wm. C. Unwin of England, Edwin A. Fisher, John R. Freeman, Gustav Lindenthal, Wm. Barclay Parsons, Charles D. Marx, J. Waldo Smith, John F. Stevens, Ambrose Swasey, Arthur W. Talbot and Onward Bates.

* * *

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

Niagara Section

The Niagara Section of A. I. E. E. held its November meeting on Friday, November 20th, in the Hotel Statler, Buffalo. An interesting presentation of the requirements for adequate service in a rapidly expanding and developing city by B. K. Boyce, Chief Engineer, of the upstate area, for the New York Telephone Co., followed an enjoyable informal dinner.

Comment: The assistance rendered the New York State Society by the A. I. E. E. warrants support from professional engineers of this state. If you are eligible join the Niagara Section of A. I. E. E.

(Continued on Page 14)

LICENSES RECOMMENDED

September–October

Allen, Walter R.
New York, N. Y.

Anson, Edward Hiram
Red Bank, N. J.

Atwood, Gilbert H.
Brooklyn, N. Y.

Augner, Charles E.
Floral Park, N. Y.

Austin, Robert W.
Amsterdam, N. Y.

Ayers, William D.
Islip, L. I., N. Y.

Balmford, J. Arthur
New York, N. Y.

Baier, Jacob J.
Easton, Pa.

Baumwell, Joseph
Brooklyn, N. Y.

Beck, Herbert H.
Cleveland, Ohio

Bentley, Elroy W.
Glens Falls, N. Y.

Bessey, Roy Frederick
New York, N. Y.

Binzen, John Peter
New York, N. Y.

Boggs, Harold V.
Syracuse, N. Y.

Boright, Wm. P.
Chatham, N. Y.

Burt, Earle A.
White Plains, N. Y.

Brigham, William C.
Ossining, N. Y.

Camp, Arthur D.
Cleveland, O.

Carpenter, Harry K.
Clarksburg, W. Va.

Carroll, John J.
Pelham, N. Y.

Chamberlain, James Ernest
Palatine Bridge, New York

Cole, Clifford B.
Buffalo, N. Y.

Collin, Edward
Peekskill, N. Y.

Cotton, Edwin R.
Williamsville, N. Y.

Daley, Charles A.
New York, N. Y.

Dingman, Charles F.
Palmer, Mass.

Doerhoefer, Frank J.
Port Edward, N. Y.

Donnell, Claude M.
Mayville, N. Y.

Drew, William B. F.
New York, N. Y.

DuMont, Herbert VanGaasbeek
Schenectady, N. Y.

Dwyer, Eugene M.
Albany, N. Y.

Eberhart, Walter M.
New York, N. Y.

Everest, Howard
Gloversville, N. Y.

Farr, Thomas Henry Powers, Jr.
New York, N. Y.

Farrington, John F.
Flushing, L. I., N. Y.

Feigert, Louis
Brooklyn, N. Y.

Field, Clesson H.
Buffalo, N. Y.

Flink, Carl H.
New York, N. Y.

Francis, Frederick Orton
Buffalo, N. Y.

Funk, Louis
New York, N. Y.

Garrison, Wm. Van Syckle, Jr.
New York, N. Y.

Goldsmith, Clarence Stoddard
Brooklyn, N. Y.

Golrick, Mark A., Jr.
Poughkeepsie, N. Y.

Goodrich, Edwin A.
Shiloh, N. J.

Gould, Robert Rutledge
Hastings, N. Y.

Gourtoff, Paul A.
New York, N. Y.

Grow, Harold J.
E. Orange, N. J.

Haddock, Wm. D.
Hempstead, N. Y.

Hardy, Robert J.
Albany, N. Y.

Harmon, Hoyt H.
Saranac Lake, N. Y.

Hayman, Jacob
New York, N. Y.

Hineser, Morris,
Bronx, N. Y.

Hirschborn, Louis N.
Brooklyn, N. Y.

Holmes, Frank D.
Harrison, N. Y.

Kasdan, Alfred S.
Elmhurst, L. I.

Kearney, Francis Jr.
Yonkers, N. Y.

Kovach, Alexander J.
Flushing, N. Y.

Kurcias, Maxwell,
New York, N. Y.

Kusnitz, Paul
Bronx, N. Y.

Lanouette, Henry B.
New York, N. Y.

Leader, Clarence
Bronx, N. Y.

Lehman, Henry M.
Brooklyn, N. Y.

Liebman, Henry
New York, N. Y.

Lockwenz, Adolph C.
Elmhurst, N. Y.

Look, Moses J.
Townsend Harbor, Mass.

McRae, Clarence C.
Albany, N. Y.

McCauley, Louis G.
Sidney, N. Y.

McCleary, Ezekiel
Fonda, N. Y.

Mahoney, Paul F.
New York, N. Y.

Malkin, Abraham
New York, N. Y.

Manbeck, Park D.
E. Cleveland, Ohio

Markush, Emery U.
New York, N. Y.

Mauzy, Andrew B.
Jersey City, N. J.

Mazzola, Louis
Brooklyn, N. Y.

Meyers, Bernard
Brooklyn, N. Y.

Milne, Gordon Ross
New York, N. Y.

Miller, Roswell
New York, N. Y.

Morrell, Joseph E.
Amsterdam, N. Y.

Munschauer, Frederick E.
Buffalo, N. Y.

Murray, William D.
New York, N. Y.

Muzzey, Lowell M.
Chatham, N. Y.

Oschrin, Leo
New York, N. Y.

Nice, Max
New York, N. Y.

Niebank, Richard J.
New York, N. Y.

Pendleton, Claude M.
Ithaca, N. Y.

Pesce, Joseph D.
Port Richmond, N. Y.

Phillips, Howard Hiram
Weedsport, N. Y.

Porcher, Francis D.
New York, N. Y.

Potter, Arthur D.
Syracuse, N. Y.

Quick, G. Everett
Syracuse, N. Y.

Reeves, Gustave F.
New York, N. Y.

Reiss, Peter
Brooklyn, N. Y.

Ridgway, John Jay
New York, N. Y.

Remington, John Clement, Jr.
Haddonfield, N. J.

Richter, Carl E.
Watertown, N. Y.

Roe, Wm. R.
New York, N. Y.

Ryan, Walter S., Jr.
Oneida, N. Y.

Sarkissian, S. G.
Croton-on-Hudson, N. Y.

Scanlon, Francis Xavier
Bronx, N. Y.

Schiller, Isidore
Bronx, N. Y.

Schmiegelow, Einer Christian
Port Washington, L. I.

Seelbach, Earl H.
Buffalo, N. Y.

Seiferling, Kurt F.
Brooklyn, N. Y.

Shadic, Leo
Philmont, N. Y.

Shakin, Samuel
New York, N. Y.

Small, Kenneth I.
New York, N. Y.

Steubach, Arnold Baldwin
Huntington, L. I., N. Y.

Strauss, Edgar
Grantwood, N. J.

Thomas, Earl R.
New York, N. Y.

Thompson, John C.
Troy, N. Y.

Thorin, Arthur
Brooklyn, N. Y.

Toussaint, Richard P.
New York, N. Y.

Tumim, Herbert R.
Buffalo, N. Y.

Tzougros, George Joseph
New York, N. Y.

Van Deusen, Clarence R.
Queens Village, L. I.

Van Steenbergh, Lamson,
Kingston, N. Y.

Van Vliet, Rutherford
Rosebank, S. I., N. Y.

Vaughn, Edward J.
Kansas City, Mo.

Veralli, Joseph J.
Brooklyn, N. Y.

Wendel, Otto G.
Buffalo, N. Y.

Wilkes, Edmund, Jr.
Peekskill, N. Y.

Wagner, Frank L.
Rochester, N. Y.

Willson, Frank J.
Batavia, N. Y.

Yanosik, George Andrew
Yonkers, N. Y.

Young, William Wallace
White Plains, N. Y.

THE ENGINEER

He is the master of the Laws of Nature. On a sound foundation of mathematics, science, and economics, he bends the materials and forces of Nature to his plan and rears the structure of civilization.

With vision, resourcefulness, and ingenuity, he labors to increase the comfort, wealth, and safety of his fellowmen.

He attacks his problems with the vision of the pioneer, the integrity of the scientist, the accuracy of the mathematician, the practicality of the business man, the resourcefulness of the inventor, and the courage of the conqueror.

He is the planner and builder. He builds his visions into enduring realities.

He is the pathfinder of civilization. He breaks down barriers, bridges chasms, establishes communication, and straightens the way for commerce and human progress.

He is the protagonist of efficiency. He reduces effort, eliminates waste, and increases production.

He is the creator of a Nation's wealth. He drains the swamps, reclaims the deserts, develops resources, and harnesses power. He builds the machinery of industry, the wheels of commerce, and the structure of business.

He is the great coordinator. He plans and directs the construction of projects representing the investment of millions of dollars and involving the labor of thousands of men.

He investigates with open mind, and gets the facts before he makes decisions. He plans with thoroughness and builds with fidelity.

To his rich heritage from the labors of past generations of engineers and scientists, he adds his contributions. He continues the work of forcing outward the challenging barriers that separate Man's efforts from the impossible.

—D. B. STEINMAN.

NEWS ITEMS

(Continued from Page 12)

PRESIDENT STUART BECOMES MEMBER OF STATE SOCIETY

The New York State Society records with pleasure the addition of Francis Lee Stuart, distinguished engineer and President of the American Society of Civil Engineers, to its membership.

* * *

AWARD OF THE JOHN FRITZ MEDAL

Dr. Michael Pupin Honored

The John Fritz Medal, generally recognized as the highest American award to a living engineer, has been conferred upon Dr. Michael Pupin of Columbia University. Scientist, engineer, author and inventor, in one person, are recognized by the Committee consisting of representatives of the American Society of Civil Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers and the American Institute of Mining and Metallurgical Engineers.

The Board which made the award for 1932 is composed of John F. Stevens, Lincoln Bush, Anson Marston and John F. Coleman of the American Society of Civil Engineers; Charles M. Schwab, Alex Dow, W. L. Abbot and Charles Piez of the American Society of Mechanical Engineers; Bancroft Gherardi, R. F. Schuchardt, Harold B. Smith and W. S. Lee of the American Institute of Electrical Engineers; and E. deColyer, George Otis Smith, Frederick W. Bradley and W. H. Bassett of the American Institute of Mining Engineers.

* * *

ENGINEERING AND MODERN CULTURE

Philosophy from Germany and South Africa

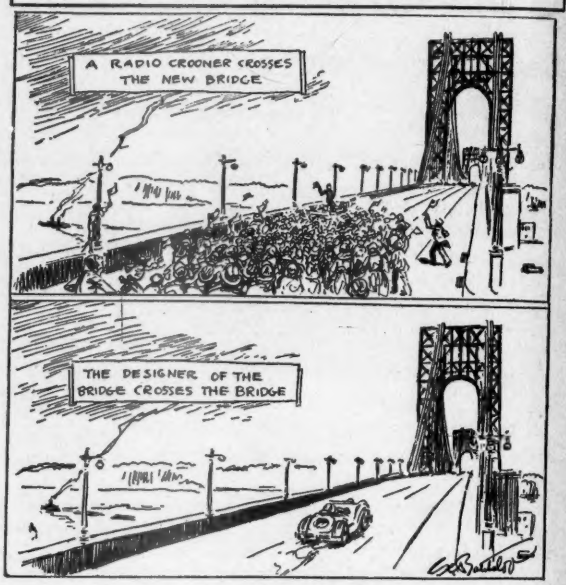
The October issue of Mechanical Engineering contains the brief of a paper delivered last May by Professor R. Plank before the Verein Deutscher Ingenieure of Germany.

In his address Prof. Plank envisions a merging of physics with metaphysics together with a consequent development of a civilization that is cultural as well as technical and mechanical.

For the person familiar with philosophy as portrayed by the thinkers of the ages who indulged their imaginations and their reasoning powers in seeking truth it is, because of its dress, interesting without offering anything very new. To the engineer who has confined his reading to the applied sciences and to current literature it should prove well worth his time and reflection.

The November issue of the same publication reviews the holistic conceptions of General Jan

WE ARE THAT WAY



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Smuts of South Africa, as set forth last September before the British Association for the Advancement of Science.

Both of the above articles are recommended for the attention of Engineers.

* * *

ENGINEERS AND WILD ANIMALS

A Legislator Confused

The following clipping from the October issue of the New Yorker speaks for itself. The original communication which was received by President Steinman during the last legislative session was one of the amusing incidents that served to lighten the work of those who were bending every effort to secure favorable action of engineering legislation.

"Mr. G., a good citizen, interested in the commonweal, addressed a letter to Senator J. L. B., The Capitol, Albany, urging him to support three bills pending before the Legislature. They had to do with the Engineers' License Law, the Education Law, and the Multiple Dwellings Act. The very next day Mr. G. received a telegram from Senator B., reading as follows: 'Am in accord with your view on bills before Legislature relating hunting and trapping wild animals and will work and vote for their passage.' Mr. G. didn't know what to do then."

Comment: How the letter came to the attention of the New Yorker is not known to the Editor.

* * *

STEVENS CELEBRATES

Stevens Institute of Technology celebrated, on September 21st last, its 60th anniversary.

Dr. Harvey N. Davis, President of the Institute, delivered an address to the student body in which he stressed the necessity of having the engineer apply his knowledge, not alone to the creation of the machinery that has made possible modern civilization but to the social and economic accompaniments of such mechanical civilization as well.

An interesting feature of the occasion was the reading of the following excerpt from a letter written by Prof. A. R. Leeds and dated Oct. 11, 1871, shortly after the opening of the Institute:

"The institute has succeeded in procuring students beyond our anticipation. There are fifteen freshmen, two sophomores, and two juniors. All the recitations, lectures, &c., are performed between 10 and 1 o'clock. The laboratories are open all day to the students. In the mechanical laboratory there are two carpenter benches and a complete set of carpenter tools, small lathe, a planing machine, forge, steam engine, &c. Indeed, the opportunity to a young man who has any mechanical skill is a most excellent one."

The present enrollment is over 500.

Congratulations to Stevens and best wishes for the success of the efforts of Pres. Davis, who has for several years been stressing the need for a more generalized engineering training that will

equip a young man with the fundamentals of all branches of the profession rather than attempt to make a specialist out of him before he knows what career circumstances will compel him to follow.

* * *

A MEMORIAL TO JAMES B. EADS

A committee, representing various civic and commercial groups, has been appointed for the purpose of erecting a national memorial to a truly great engineer who was a pioneer in several fields of engineering endeavor. James B. Eads, engineer of the famous bridge across the Missisippi at St. Louis which bears his name and of the jetties and river improvements at the mouth of that river, is to have erected in his honor a great monument at the water gate of New Orleans. As set forth by the sponsors the monument is to be "expressive of the strength of character, determination and perseverance of a man who was willing to back his work with every ounce of manhood and every dollar of his fortune."

Amongst the organizations cooperating are the following: American Society of Civil Engineers; Louisiana Engineering Society; New Orleans Association of Commerce; New Orleans Steamship Association; New Orleans Board of Trade; Port of New Orleans Association of Pilots; New Orleans Cotton Exchange; New Orleans Stock Exchange, and Board of Commissioners for the Port of New Orleans.

A. S. M. E. ACTIVITIES

September Meeting in Kansas City

Over four hundred engineers attended the several sessions of the Kansas City meeting of the American Society of Mechanical Engineers which took place on the 7th, 8th and 9th of September.

An address of welcome was delivered by Joseph F. Porter, President of the Kansas City Light and Power Company. President Roy V. Wright responded for the Society. Social and non-technical activities formed part of the program. The closing feature was a dinner dance at which E. L. Manning delivered a lecture on the adventures of Science.

Amongst those participating in the proceedings were representatives of the A. S. C. E., A. I. E. E., American Society of Heating and Ventilating Engineers, American Chemical Society, Engineers Club of Kansas City, Universities and Colleges of the Southwest, National Association of Power Engineers, National Electric Light Association, National Safety Council, State Association of Municipal Utilities, Southwestern Interstate Coal Operators Association and Kansas City Coal Service Institute.

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CHAPTER NEWS

QUEENS COUNTY (R. J. Smyth)

The Queens County Chapter held its Third Annual Dinner Meeting on October 29th at the Jamaica Chamber of Commerce. The guests of honor were Dr. D. B. Steinman, President of the New York State Society, Mr. G. A. Burr, Consulting Engineer in private practice and Major Oscar E. Erlandsen, Consulting Engineer of the Borough of Queens. Dr. Steinman discussed the status of the Professional Engineer in the United States and Canada. Mr. Burr described conditions under which engineering works are conducted in Mexico where he practiced for a number of years. Major Erlandsen gave expression to the growing popular appreciation of the activities of engineers in the field of civic endeavor. These discussions comprised a most instructive symposium of the activities of engineers and engineering organizations in the three great countries on the North American Continent and emphasized the social value of the contributions of service by engineers outside of the sphere of their professional practice.

The meeting was attended by over seventy members representing about two-thirds of the total membership of the Chapter. Thirteen new members were elected at the meeting giving added numerical strength to the Chapter and encouragement to its energetic and progressive President, Mr. Edgar A. McKenna.

BRONX COUNTY

It is interesting to note that eight new names were added to the membership roster of Bronx County Chapter at its last meeting which was held on November 1st.

These accessions to the membership of the Chapters during this period of economic difficulty are indicative of the expanding realization by engineers throughout the State of the value of the services to the profession which this Society and its Chapters are rendering. The work done now by Chapter Membership Committees will bear fruit most essential to the success of the Society's program.

WESTCHESTER COUNTY (R. J. VanWagner)

Severe criticism of the administration of the Department of Public Works in the City of New Rochelle has resulted in the resignation of the Commissioner in charge of that department.

With a view to placing public improvements under the control of a trained and qualified expert the Mayor has appointed Mr. Bert J. Young, Resident Engineer of the Westchester County Parkway Commission, as successor to the resigned Commissioner.

Mr. Young, a member of Westchester Chapter, has been in active practice for more than 20 years

and enjoys a splendid reputation both personally and professionally.

The policy of placing engineers at the helm of agencies intrusted with the planning, executing and maintaining of public works in gradually recommending itself to elective officials as well as to the general public. There is little doubt that taxpayers would benefit considerably if engineers were placed in complete control of engineering projects.

Editor's Comment: Every Chapter is expected to furnish news items before the 8th day of each month. It is impossible to print Chapter news when none is received. Co-operation is not being received from central, western and northern New York. Please forward meeting dates and news, Chapter activities and programs to R. J. Smyth, c/o New York State Society of Professional Engineers, Grand Central Terminal, New York, N. Y.

EXAMINATIONS FOR REGISTRATION

(Continued from Page 10)

Professional Ethics—Now included by 9 States. Not favored by 3 Board members. Committee recommendation: **Include.**

Accordingly the Committee recommends that the standard uniform examination for Professional Engineers cover the following scope in **Engineering Administration:** Engineering Economics, Contracts, Specifications, Professional Practice, Professional Ethics.

Schedule for Uniform Examinations

Based on the foregoing selection and elimination of subjects, the Committee recommends the following as a practical schedule for the standard uniform examinations for Professional Engineers.

One and one-half days should be assigned to the uniform examinations, leaving one-half day for the differentiated (specialized) examination.

The uniform examinations are divided into three Parts, one for each half-day (morning or afternoon) assigned thereto.

Part 1. Mathematics and Applied Sciences—to be given the morning of the first day. It is suggested that the examination paper should comprise about 7 practical questions in Mathematics (ranging from Algebra to Calculus) and about 8 practical questions in Applied Science (covering Physics, Mechanics and Chemistry), and that the candidate should be required to answer only 10 questions out of the total number. A slide rule may be used in this part of the examinations, but no reference books are to be used. Total time allowed, 3 hours.

Part 2. Materials of Construction and Elements of Structural Design—to be given the afternoon of the first day. It is suggested that the examination paper should comprise about 5 questions on Materials of Construction (including Steel, Concrete, Masonry, and Timber) and about 10 ques-

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tions on Structural Design (including Stress Analysis, Structural Elements and Graphic Statics) and that the candidate should be required to answer only 10 questions out of the total number. Slide rule and reference books may be used. Total time allowed, 3 hours.

Part 3. Elements of Mechanical and Electrical Design and Engineering Administration—to be given the morning of the second day. It is suggested that the examination paper should comprise about 6 questions in Elements of Mechanical Design (including Steam Power, Water Power, and Mechanical Transmissions) about 4 questions in Elements of Electrical Design (including Electrical Principles, Circuits, Motors and Generators) and about 5 questions in General Engineering Administration (including Engineering Economics, Contracts, Specifications, and Professional Practice.) The candidate should be required to answer only 10 questions out of the total number. Slide rule and reference books may be used. Total time allowed, 3 hours.

The foregoing recommended schedule leaves the afternoon of the second day available for the differentiated, specialized examination, to be designated as Part 4. (To be concluded in future issue)

* * *

EDITORS NOTE:

On License Laws and Engineers

(Continued from Page 11)

The aforementioned does not include engineers trained at the United States Military and Naval Academies and other institutions of high standing, particularly in foreign countries, where certificates and diplomas instead of degrees are given as credentials.

* * *

APPROVAL OF THE SOCIETY'S AIMS

Commendation Worth Noting

The following letter from the pen of a prominent electrical engineer is an eloquent appeal which needs no editorial elaboration.

November 3, 1931.

Mr. D. B. Steinman, President
The New York State Society of Professional Engineers,
Grand Central Terminal,
New York, N. Y.

Dear Mr. Steinman:

I have your letter of October 27th with enclosures for which please accept my acknowledgment. I had already read your address to the American Society of Civil Engineers. I made reference to it

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in discussing the status of the Engineering Profession at the Conference of Officers and Delegates of the American Institute of Electrical Engineers at Asheville, North Carolina, last June.

I thoroughly agree with the statement of "What the State Society Stands For" as contained in the reprint from the American Engineer enclosed with your letter. It is extremely regrettable that one professional group finds itself in the position of having to protect itself against another similar group. Such a situation does not seem to me to speak very well for the ethical standards of the architectural profession. Also, I confess to having been one of those who was opposed to the licensing of engineers, but as Grover Cleveland is reputed to once have remarked "It is a condition we are facing, not a theory" and I have now come to realize that licensing of engineers is an accomplished fact and hence is removed from debatable ground and that the only alternative left to engineers is to fight for the solidarity of the engineering profession, equitable licensing laws recognizing this principle and effective administration of such laws.

I have always felt that a great mistake was made when the engineering profession in this country split itself up into a number of separate national societies. The attempt of these societies to cooperate through the American Engineering Council I also felt has not been entirely happy in its results. It may be that the State Society of Professional Engineers will be the medium through which the solidarity of the profession will be maintained. Certainly the New York State Society is most fortunate in its president and if it continues to support and promote objectives which you have so clearly and effectively laid down in your statement of "What the State Society Stands For" it will surely be doing valuable work for the engineering profession not only of the State of New York but of the whole country.

I have not as yet become a member of the Society but I recently received a copy of the American Engineer containing an application blank which I intend to make use of in the near future and I will be glad to be of what assistance I can in the promoting of the stated objectives of the society.

I should be glad indeed to be placed on the mailing list for the American Engineer.

Yours truly,

In view of the fact that the above letter has been published without consulting the author the proprieties suggest withholding his name from publication.

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It is your duty, as a member of the Profession, to aid in this work by becoming a member of the New York State Society immediately.

You are invited to fill out the application blank below.

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Application may be made to the Chairman of the Membership Committee, F. H. Zurmuhlen, Jr., Grand Central Terminal Bldg., Room 2952, New York, N. Y., or

Inquire at your local chapter.

Where Chapters exist, membership application must be made through your County Chapter.

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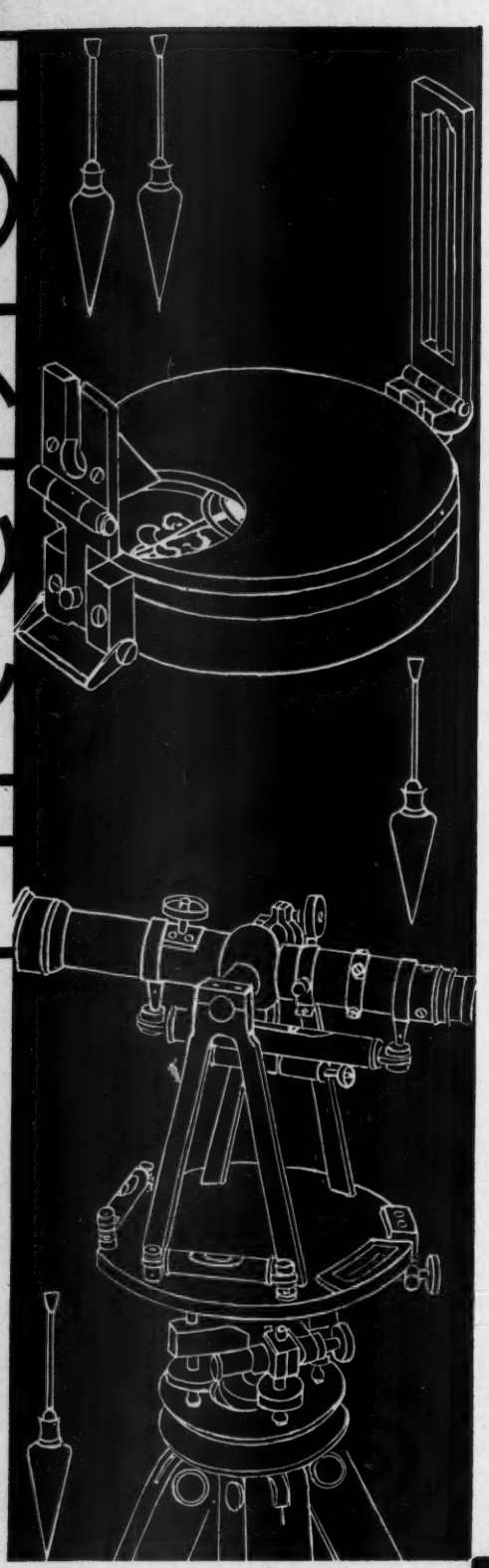

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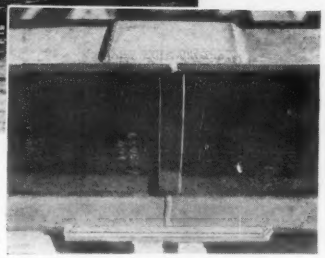

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